Figure 1: Verification of differential expression of human DAX-1 by quantitative RT-PCR

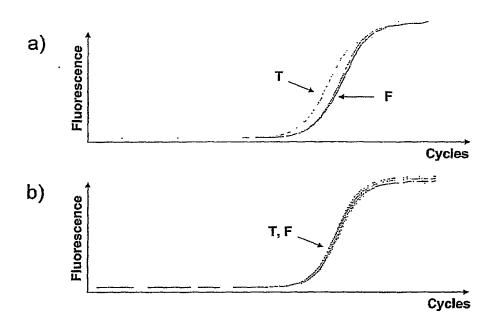


Figure 2: Verification of differential expression of human DAX-1 by quantitative RT-PCR

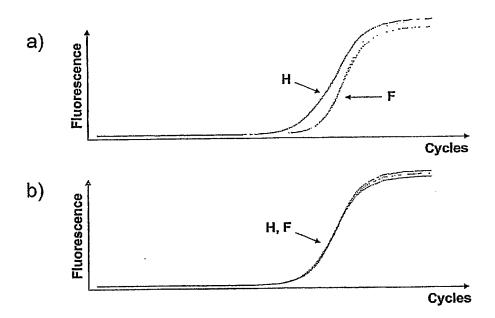


Figure 3: Analysis of absolute mRNA expression of DAX-1

Comparison of Braak 0-3 with 4-6

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Comparison of Braak 0-1 with 2-6

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Comparison of Braak 0-2 with Braak 3-6

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Comparison of Braak 0-1 with 2-3 and 4-6

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# Figure 4: SEQ ID NO. 1: amino acid sequence of human DAX-1 protein

# Length: 470 aa

1	MAGENHOWOG	SILYNMLMSA	KQTRAAPEAP	ETRLVDQCWG	CSCGDEPGVG
51	REGLLGGRNV	ALLYRCCFCG	KDHPRQGSIL	YSMLTSAKQT	YAAPKAPEAT
101	LGPCWGCSCG	SDPGVGRAGL	PGGRPVALLY	RCCFCGEDHP	RQGSILYSLL
151		AAPEARPGGA			
201		STLYCVPTST			
251	POVVCEAASA	GLLKTLRFVK	YLPCFQVLPL	DQQLVLVRNC	WASLLMLELA
301		VSEPSMLQKI			
351	KVPSASQVQA	IKCFLSKCWS	LNISTKEYAY	LKGTVLFNPD	VPGLQCVKYI
401	QGLQWGTQQI	LSEHTRMTHO	GPHDRFIELN	STLFLLRFIN	ANVIAELFFR
451	PIIGTVSMDD	MMLEMLCTKI			

# Figure 5: SEQ ID NO. 2: human DAX-1 cDNA nucleotide sequence

# Length: 2022 bp

1	GAGCTCCCAC	GCTGCTGTTC	TTCCATTTCC	AGCTTTTAAA	GAGCACCCGC
51	CCCTTCGAAC	CACCGAGGTC	ATGGGCGAAC	ACACCGGAGC	GCAGACCGCG
101	CCCCCCGCA	CACACCGCCC	GCCTCCGCGC	CCTTGCCCAG	ACCGAGGCGG
151	CCGACGCGCC	TGCGTGCGCG	CTAGGTATAA	ATAGGTCCCA	GGAGGCAGCC
201	ACTGGGCAGA	ACTGGGCTAC	GGGCGCCGCG	GGCCATGGCG	GGCGAGAACC
251	ACCAGTGGCA	GGGCAGCATC	CTCTACAACA	TGCTTATGAG	CGCGAAGCAA
301	ACGCGCGCGG	CTCCTGAGGC	TCCAGAGACG	CGGCTGGTGG	ATCAGTGTTG
351	GGGCTGTTCG	TGCGGCGATG	AGCCCGGGGT	GGGCAGAGAG	GGGCTGCTGG
401	GCGGGCGGAA	CGTGGCGCTC	CTGTACCGCT	GCTGCTTTTG	CGGTAAAGAC
451	CACCCACGGC	AGGGCAGCAT	CCTCTACAGC	ATGCTGACGA	GCGCAAAGCA
501	AACGTACGCG	GCACCGAAGG	CGCCCGAGGC	GACGCTGGGT	CCGTGCTGGG
551	GCTGTTCGTG	CGGCTCTGAT	CCCGGGGTGG	GCAGAGCGGG	GCTTCCGGGT
601	GGGCGGCCCG	TGGCACTCCT	GTACCGCTGC	TGCTTTTGTG	GTGAAGACCA
651	CCCGCGGCAG	GGCAGCATCC	TCTACAGCTT	GCTCACTAGC	TCAAAGCAAA
701	CGCACGTGGC	TCCGGCAGCG	CCCGAGGCAC	GGCCAGGGGG	CGCGTGGTGG
751	GACCGCTCCT	ACTTCGCGCA	GAGGCCAGGG	GGTAAAGAGG	CGCTACCAGG
801	CGGGCGGGCC	ACGGCGCTTC	TGTACCGCTG	CTGCTTTTGC	GGTGAAGACC
851	ACCCGCAGCA	GGGCAGCACC	CTCTACTGCG	TGCCCACGAG	CACAAATCAA
901	GCGCAGGCGG	CTCCGGAGGA		GCCCCTGGT	GGGACACCTC
951	CTCTGGTGCG	CTGCGGCCGG	TGGCGCTCAA	GAGTCCACAG	GTGGTCTGCG
1001	AGGCAGCCTC	AGCGGGCCTG	TTGAAGACGC	TGCGCTTCGT	CAAGTACTTG
1051	CCCTGCTTCC	AGGTGCTGCC	CCTGGACCAG	CAGCTGGTGC	TGGTGCGCAA
1101	CTGCTGGGCG	TCCCTGCTCA	TGCTTGAGCT	GGCCCAGGAC	CGCTTGCAGT
1151	TCGAGACTGT	GGAAGTCTCG	GAGCCCAGCA	TGCTGCAGAA	GATCCTCACC
1201	ACCAGGCGGC	GGGAGACCGG	GGGCAACGAG	CCACTGCCCG	TGCCCACGCT
1251	GCAGCACCAT	TTGGCACCGC	CGGCGGAGGC	CAGGAAGGTG	CCCTCCGCCT
1301	CCCAGGTCCA	AGCCATCAAG	TGCTTTCTTT	CCAAATGCTG	GAGTCTGAAC
1351	ATCAGTACCA	AGGAGTACGC	CTACCTCAAG	GGGACCGTGC	TCTTTAACCC
1401	GGACGTGCCG	GGCCTGCAGT	GCGTGAAGTA	CATTCAGGGA	CTCCAGTGGG
1451	GAACTCAGCA	AATACTCAGT	GAACACACCA	GGATGACGCA	CCAAGGGCCC
1501	CATGACAGAT	TCATCGAACT	TAATAGTACC	CTTTTCCTGC	TGAGATTCAT
1551	CAATGCCAAT	GTCATTGCTG	AACTGTTCTT	CAGGCCCATC	ATCGGCACAG
1601	TCAGCATGGA	TGATATGATG	CTGGAAATGC	TCTGTACAAA	GATATAAAGT
1651	CATGTGGGCC	ACACAAGTGC	AGTAGTGCAG	TTCACCATGA	GGGAAGAATA
1701	AAGAGCTGTG	GGCAAAAGAG	TGTAAAATAT	TTTAAAATAA	ACTTTCTTAA
1751	TATTTTTACA	TGCAGAGTAT	TTTGATCTTC	AATTAAAGAA	ATAATTTTAT
1801	TCCCAGCACA	GTCACAAATT	TCTCTGTTCC	ATAGTTAAAG	AAGACATTTG
1851	CCAACAGGTA	GCATAGCTCT	GTACATCTTT	TAAAAAAAAA	ATCGCAGGGT
1901	ACTAGTATAA		TCACAAGCGC	AGCAATTTCA	TGGAACCTGC
1951	TCAAATCAAA	TTTGTACATA	TTGTTATAAT	AAATTTTAAG	GTCTTAACTA
2001	TTAACTTGAT	TGAAAAAAGC	TT		

# Figure 6: SEQ ID NO. 3: nucleotide sequence of human DAX-1 coding sequence

# Length: 1413 bp

1	ATGGCGGGCG	AGAACCACCA	GTGGCAGGGC	AGCATCCTCT	ACAACATGCT
51	TATGAGCGCG	AAGCAAACGC	GCGCGGCTCC	TGAGGCTCCA	GAGACGCGGC
101	TGGTGGATCA	GTGTTGGGGC	TGTTCGTGCG	GCGATGAGCC	CGGGGTGGGC
151	AGAGAGGGC	TGCTGGGCGG	GCGGAACGTG	GCGCTCCTGT	ACCGCTGCTG
201	CTTTTGCGGT	AAAGACCACC	CACGGCAGGG	CAGCATCCTC	TACAGCATGC
251	TGACGAGCGC	AAAGCAAACG	TACGCGGCAC	CGAAGGCGCC	CGAGGCGACG
301	CTGGGTCCGT	GCTGGGGCTG	TTCGTGCGGC	TCTGATCCCG	GGGTGGGCAG
351	AGCGGGGCTT	CCGGGTGGGC	GGCCCGTGGC	ACTCCTGTAC	CGCTGCTGCT
401	TTTGTGGTGA	AGACCACCCG	CGGCAGGGCA	GCATCCTCTA	CAGCTTGCTC
451	ACTAGCTCAA	AGCAAACGCA	CGTGGCTCCG	GCAGCGCCCG	AGGCACGGCC
501	AGGGGGCGCG	TGGTGGGACC	GCTCCTACTT	CGCGCAGAGG	CCAGGGGGTA
551	AAGAGGCGCT	ACCAGGCGGG	CGGGCCACGG	CGCTTCTGTA	CCGCTGCTGC
601	TTTTGCGGTG	AAGACCACCC	GCAGCAGGGC	AGCACCCTCT	ACTGCGTGCC
651	CACGAGCACA	AATCAAGCGC	AGGCGGCTCC	GGAGGAGCGG	CCGAGGGCCC
701	CCTGGTGGGA	CACCTCCTCT	GGTGCGCTGC	GGCCGGTGGC	GCTCAAGAGT
751	CCACAGGTGG	TCTGCGAGGC	AGCCTCAGCG	GGCCTGTTGA	AGACGCTGCG
801	CTTCGTCAAG	TACTTGCCCT	GCTTCCAGGT	GCTGCCCCTG	GACCAGCAGC
851	TGGTGCTGGT	GCGCAACTGC	TGGGCGTCCC	TGCTCATGCT	TGAGCTGGCC
901	CAGGACCGCT	TGCAGTTCGA	GACTGTGGAA	GTCTCGGAGC	CCAGCATGCT
951	GCAGAAGATC	CTCACCACCA	GGCGGCGGGA	GACCGGGGGC	AACGAGCCAC
1001	TGCCCGTGCC	CACGCTGCAG	CACCATTTGG	CACCGCCGGC	GGAGGCCAGG
1051	AAGGTGCCCT	CCGCCTCCCA	GGTCCAAGCC	ATCAAGTGCT	TTCTTTCCAA
1101	ATGCTGGAGT	CTGAACATCA	GTACCAAGGA	GTACGCCTAC	CTCAAGGGGA
1151	CCGTGCTCTT	TAACCCGGAC	GTGCCGGGCC	TGCAGTGCGT	GAAGTACATT
1201	CAGGGACTCC	AGTGGGGAAC	TCAGCAAATA	CTCAGTGAAC	ACACCAGGAT
1251	GACGCACCAA	GGGCCCCATG	ACAGATTCAT	CGAACTTAAT	AGTACCCTTT
1301	TCCTGCTGAG	ATTCATCAAT	GCCAATGTCA	TTGCTGAACT	GTTCTTCAGG
1351	CCCATCATCG	GCACAGTCAG	CATGGATGAT	ATGATGCTGG	AAATGCTCTG
1401	TACAAAGATA	TAA			

# Figure 7: Alignment of DAX-1 primers with human DAX-1 cDNA, SEQ ID NO. 2

Figure 8:

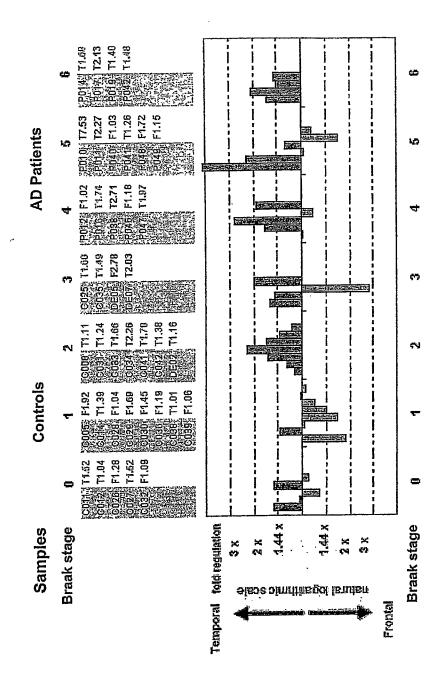


Figure 9:

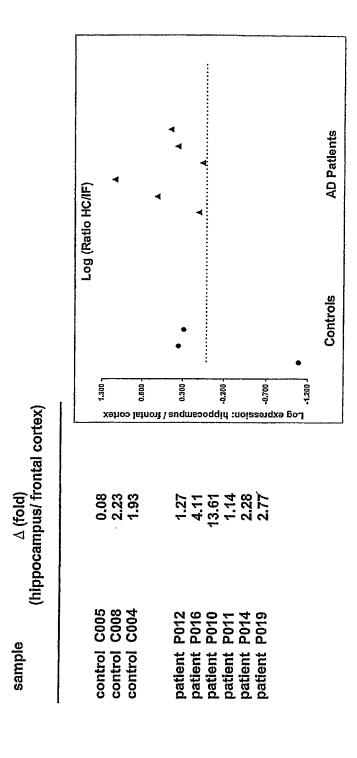


Figure 10: Western Blot of total human brain extracts labeled with anti-DAX-1 antibodies

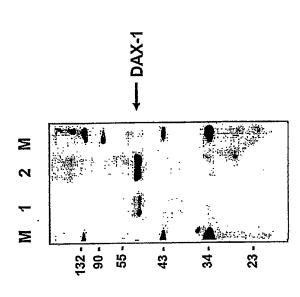


Figure 11: Images of human brain sections labeled with anti-DAX-1 antiserum and with DAPI

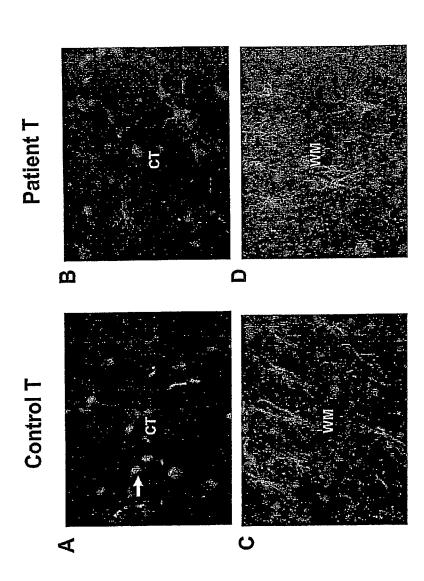
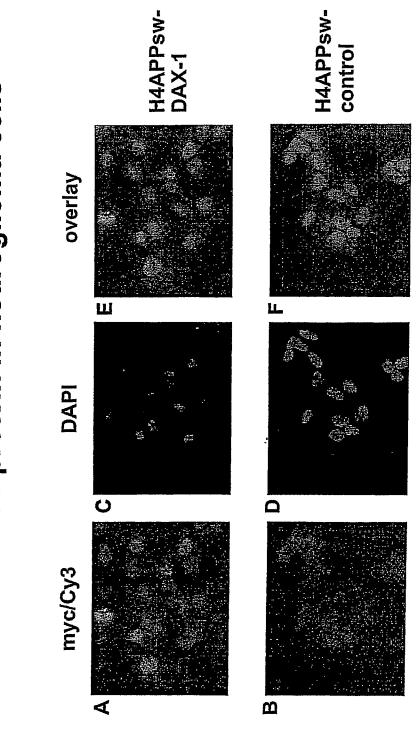
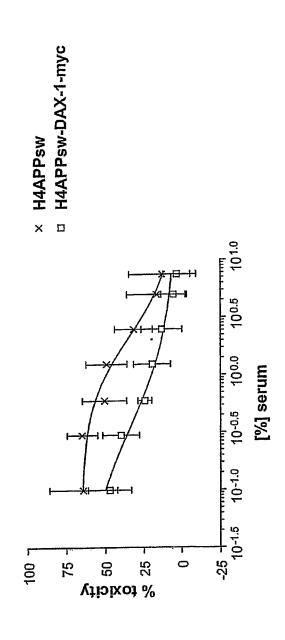


Figure 12: Immunofluorescence analysis of DAX-1 protein in neuroglioma cells



Effect of trophic factor deprivation on DAX-1 over-expressing cells Figure 13:



# Figure 14: DAX-1 Protein expression in transgenic flies

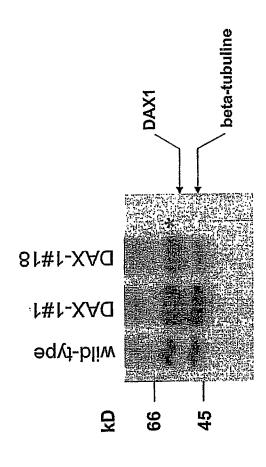


Figure 15: DAX-1 Protein expression in the retina of adult flies

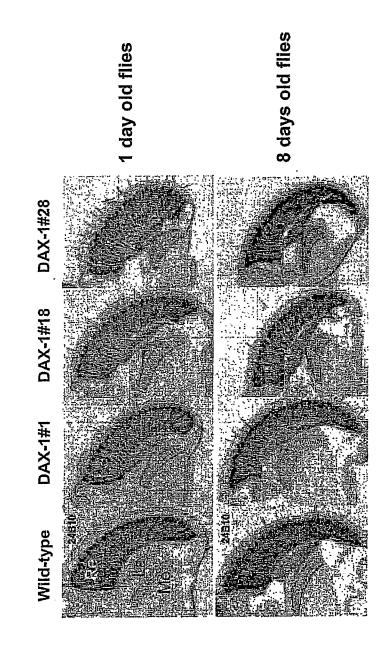
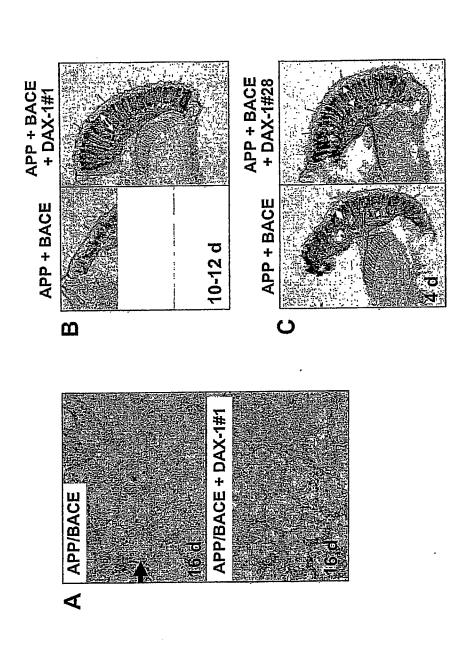


Figure 16: DAX-1 rescues photoreceptor cell degeneration induced by APP/BACE



PCT/EP2004/052684 WO 2005/071418

Figure 17: Thioflavin S positive amyloid plaques in DAX-1 expressing flies

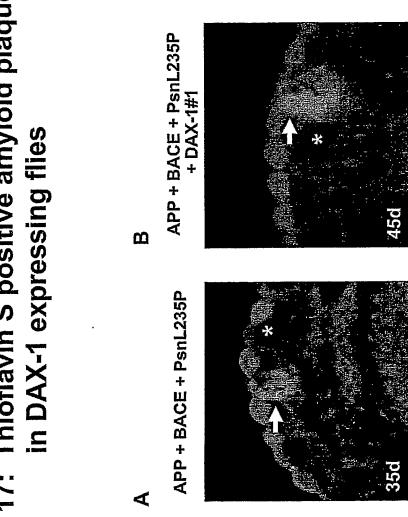
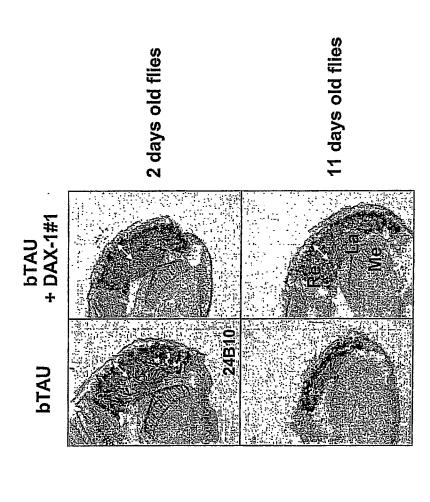
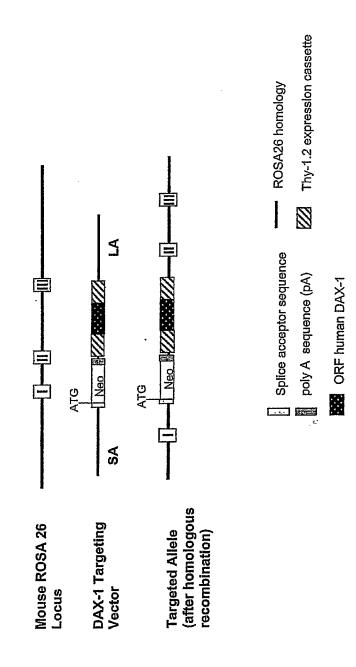


Figure 18: DAX-1 rescues photoreceptor cell degeneration induced by TAU



# Figure 19: Generation of DAX-1 transgenic mice



PCT/EP2004/052684 WO 2005/071418

Figure 20: DAX-1 targeted ES cell clones

